03050103-060

(Fishing Creek)

General Description

Watershed 03050103-060 extends through York and Chester Counties and consists primarily of ***Fishing Creek*** and its tributaries from Wildcat Creek to Great Falls Reservoir. The watershed occupies 136,109 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Pacolet-Mecklenburg-Iredell series. The erodibility of the soil (K) averages 0.22; the slope of the terrain averages 8%, with a range of 2-25%. Land use/land cover in the watershed includes: 61.0% forested land, 17.6% agricultural land, 13.4% scrub/shrub land, 6.1% urban land, 1.4% barren land, and 0.5% water.

This segment of Fishing Creek accepts the drainage from the upper reach (03050103-050) and from Wildcat Creek (Tools Fork, Dye Creek), which originates near the City of Rock Hill. Taylor Creek enters Fishing Creek downstream of Wildcat Creek, followed by Stoney Fork, Browns Branch, and Clinton Branch. Further downstream, South Fork Fishing Creek (Love Creek, Conrad Creek) merges with Fishing Creek followed by Hicklin Branch (McFadden Branch), the Tinkers Creek watershed (03050103-070), Reeves Creek, and Dairy Branch near the Town of Fort Lawn. Lake Oliphant (40 acres) is located on a tributary to Conrad Creek and is used for recreational purposes. There are several other ponds and lakes in the watershed (totaling 190.8 acres) used for irrigation and recreation. Fishing Creek empties into and forms the headwaters of Great Falls Reservoir. There are a total of 274.2 stream miles in this watershed, all classified FW.

Water Quality

Station #	Type	Class	Description
CW-006	S	FW	WILDCAT CREEK AT S-46-650
CW-212	S	FW	TOOLS FORK AT S-46-195 7 MI NW OF ROCK HILL
CW-096	S	FW	WILDCAT CREEK AT S-46-998 9 MI ENE OF MCCONNELLS
CW-224	S	FW	FISHING CREEK AT S-46-163
CW-697	BIO	FW	STONEY FORK AT SC 121 &72
CW-695	BIO	FW	TAYLOR CREEK AT S-46-735
CW-654	BIO	FW	FISHING CREEK AT S-46-655
CW-007	BIO	FW	SOUTH FORK FISHING CREEK AT S-12-50
CW-008	P	FW	FISHING CREEK AT SC 223 NE RICHBURG
CW-233	W	FW	FISHING CREEK AT S-12-77
CL-021	W	FW	LAKE OLIPHANT, FOREBAY EQUIDISTANT FROM DAM & SHORE

Fishing Creek **-** There are four monitoring sites along this lower section of Fishing Creek. Aquatic life uses are fully supported at the furthest upstream site ***(CW-224)***. There is a significant decreasing trend in pH. A high concentration of chromium was measured and di-n-butylphthalate was detected in the 1995 sediment sample. The PAHs fluoranthene, phenanthrene, pyrene, and benzo(a)anthracene were detected in the 1997 sediment sample, and PCB-1248 was detected in the 1998 sample. A significant decreasing trend in total phosphorus concentrations suggests improving conditions for this parameter. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. At the next site downstream

(CW-654), aquatic life uses are partially supported based on macroinvertebrate community data.

Aquatic life uses are fully supported at ***CW-008;*** however there was a high concentration of zinc measured in 1994 and a high concentration of chromium measured in 1996. There is a significant decreasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentrations suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria concentrations. At the furthest downstream site ***(CW-233)***, aquatic life uses are fully supported; however there was a very high concentration of copper measured in 1998. Recreational uses are partially supported due to fecal coliform bacteria excursions.

South Fork Fishing Creek (CW-007) - Aquatic life uses are partially supported based on macroinvertebrate community data.

Wildcat Creek - There are two monitoring sites along Wildcat Creek. Aquatic life uses are fully supported at the upstream site ***(CW-006)***; however very high concentrations of lead and zinc were measured in the 1997 sediment sample. Also in sediments, PCB-1248 was detected in the 1998 sample and O,P'DDE (a metabolite of DDT) was detected in 1994. Although the use of DDT was banned in 1973, it is very persistent in the environment. Significant decreasing trends in five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions.

Downstream of Tools Fork ***(CW-096)***, aquatic life uses are not supported due to occurrences of copper in excess of the aquatic life acute standards. In addition, there was a high concentration of chromium measured in 1997. There is also a significant decreasing trend in pH. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and turbidity suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions; however a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

Tools Fork (CW-212) - Aquatic life uses are fully supported; however there is a significant increasing trend in total phosphorus concentrations. There is a significant decreasing trend in pH. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions; however a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

Stoney Fork (CW-697) - Aquatic life uses are partially supported based on macroinvertebrate community data.

Taylor Creek (CW-695) - Aquatic life uses are partially supported based on macroinvertebrate community data.

Lake Oliphant (CL-021) - Lake Oliphant has a watershed extending over 1.1 km², a surface area of 16.2 hectares, and a maximum and mean depth of 6.7m and 1.7m, respectively. Grass carp were introduced into Lake Oliphant in 1992 as a biological control of aquatic plants to provide public access for boating and fishing. The fish stocking was successful and no additional treatments were necessary to control the aquatic plants. Although there was a pH excursion, due to the small number of samples, determination of aquatic life use support is inconclusive. Recreational uses are fully supported.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM	***NPDES#***
FACILITY NAME	***TYPE***
PERMITTED FLOW @ PIPE (MGD)	***LIMITATION***
COMMENT	
FISHING CREEK	SC0001741
CITY OF CHESTER/LANDO-MANETTA PLT	MINOR DOMESTIC
PIPE #: 001 FLOW: 0.50	WATER QUALITY
WQL FOR NH3-N, TRC, DO	
TOOLS FORK	SC0039217
UTILS. OF SC/COUNTRY OAKS SD	MINOR DOMESTIC
PIPE #: 001 FLOW: .020	WATER QUALITY
WQL FOR BOD_5, NH3-N, TRC, DO	
TOOLS FORK TRIB	SC0041670
ADNAH RD MHP/BLUE RIBBON WATER	MINOR DOMESTIC
PIPE #: 001 FLOW: .040	WATER QUALITY
WQL FOR BOD_5, NH3-N, TRC, DO	
UNCONSTRUCTED	
DYE CREEK	SC0029378
YORK PRINTING & FINISHING, INC.	MINOR INDUSTRIAL
PIPE #: 001 FLOW: M/R	EFFLUENT
(SCG645038 AS OF 8/31/99)	
TAYLOR CREEK	SCG730061
MARTIN MARIETTA/ROCK HILL QUARRY	MINOR INDUSTRIAL
PIPE #: 001 FLOW: M/R	EFFLUENT
CLINTON BRANCH	SC0041203
PINETUCK SDPINETUCK UTILS.	MINOR DOMESTIC
PIPE #: 001 FLOW : 0.15	WATER QUALITY
WQL FOR BOD_5, NH3-N, TRC, DO	
UNCONSTRUCTED	
CLINTON BRANCH	SC0042129
KENTUCKY-CUMBERLAND COAL CO.	MINOR INDUSTRIAL
PIPE #: 001 FLOW: M/R	EFFLUENT

Nonpoint Source Management Program

Mining Activities

MINING COMPANY *MINE NAME* *COMMENTS*	*PERMIT #* *MINERAL*
REA CONSTRUCTION CO. FISHING CREEK MINE INSTREAM DREDGING	0178-23 SAND
LINEBERGER GRADING & PAVING WALLACE SAND PIT INSTREAM DREDGING	0605-23 SAND
MARTIN MARIETTA AGGREGATES ROCK HILL QUARRY	0104-91 GRANITE
RAMBO ASSOCIATES RAMBO ASSOCIATES MINE	1112-91 GRANITE

Land Disposal Activities

Landfill Facilities

SOLID WASTE LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
CITY OF ROCK HILL MUNICIPAL	261002-1702 (CWP-025, 461002-1202) ACTIVE
CITY OF ROCK HILL MUNICIPAL	461002-1201 (DWP-901) ---
COUNTY SQUIRE S/T LC DEBRIS CONSTRUCTION	462452-1701 (462452-1301) ACTIVE
POPE CONSTRUCTION C/C LANDFILL CONSTRUCTION	462424-1201 (CWP-002, IWP-165, 462424-1601) ---

Growth Potential

The major development factor in this watershed is the southern and western portions of the City of Rock Hill. Portions of the Towns of McConnells, Lowrys, Richburg, Fort Lawn, and Great Falls, together with the unincorporated communities of Edgemoor and Lando, are also located in this watershed. Water and sewer services are limited to the areas around Rock Hill and the S.C. Hwy. 9 corridor in Chester County. However, the Chester Metro District is discussing extending a line down from Rock Hill along S.C. Hwy. 901 and up from Chester along S.C. Hwy. 9. Some industrial development occurs along the S.C. Hwy. 9 corridor. I-77 extends through the area, but there is only one interchange and it has no utilities. The area around McConnells and Lowrys has a high level of agricultural activity. The potential for future development is greatest near the Rock Hill area and the S.C. Hwy. 9 corridor. The City of Chester has proposed expanding facilities that discharge to Fishing Creek in order to serve the growth of the area.

Watershed Protection and Restoration

Special Projects

NPS Assessment and TMDL for Phosphorus in the Catawba River Basin

SCDHEC has contracted with the University of South Carolina to quantify relationships between land use and water quality in the Catawba River Basin. The project will evaluate these relationships using the WARMF model, which will be used to develop a TMDL for total phosphorus in Fishing Creek Reservoir, Cedar Creek Reservoir, and Lake Wateree. The TMDL is being developed in cooperation with the North Carolina Division of Water Quality and will involve stakeholders in the basin. Additional information about the TMDL development process can be found in Appendix B.